

## AMENDMENT AND RESPONSE

PAGE 2

Serial No.: 09/826,246

Filing Date: June 29, 2004

Attorney Docket No. 100.169US01

Title: FILTER STRUCTURE INCLUDING CIRCUIT BOARD

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**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of claims:**

- 1-5. (Canceled)
6. (Previously presented) The filter assembly of claim 13, wherein the at least one circuit element further comprises an amplifier.
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7. (Original) The filter assembly of claim 6, wherein the amplifier is one of a low noise amplifier and a power amplifier.
- 8-12. (Canceled)
13. (Previously presented) A filter assembly, comprising:  
an enclosure having a cavity;  
at least one wall of the enclosure comprised of a circuit board;  
a trace formed on the circuit board; and  
at least one circuit element, coupled to the trace; and  
wherein the filter assembly further comprises:  
a first filter stage and a second filter stage formed in the enclosure, wherein the first and second filter stage each have a cavity;  
an input connector attached to the circuit board and coupled to the first filter stage;  
an output coupling structure mounted in the cavity of the first filter stage and coupled to an input of a low noise amplifier;  
an input coupling structure mounted in the cavity of the second filter stage and coupled to an output of the low noise amplifier; and  
an output connector attached to the circuit board coupled to the cavity of the second filter stage.

## AMENDMENT AND RESPONSE

PAGE 3

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14. (Previously presented) The filter assembly of claim 13, wherein the circuit board comprises an inter-stage coupling circuit, the inter-stage coupling circuit comprising:  
the input coupling structure; and  
the output coupling structure.
15. (Original) The filter assembly of claim 14, wherein the inter-stage coupling circuit further comprises a signal trace formed on the circuit board.
- ~~16. (Original) The filter assembly of claim 15, wherein the signal trace is formed in one of an~~  
internal circuit layer of the circuit board and a surface circuit layer of the circuit board.
- 17-39. (Canceled)
- 40-41. (Canceled)
- 42-44. (Canceled)
45. (Canceled)
46. (Canceled)
47. (Previously presented) A method of making a filter assembly, comprising:  
forming a cavity body with a cavity and with at least one opening in the cavity body;  
forming a trace on a printed circuit board;  
coupling an electronic component to the trace; and  
covering the at least one opening in the cavity body with the printed circuit board; and  
wherein forming the circuit board further comprises:  
forming a first filter stage and a second filter stage formed in the enclosure,  
wherein the first and second filter stage each have cavity;

## AMENDMENT AND RESPONSE

PAGE 4

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forming an input connector attached to the circuit board and coupled to the first filter stage;

forming an output coupling structure mounted in the cavity of the first filter stage and coupled to an input of a low noise amplifier;

forming an input coupling structure mounted in the cavity of the second filter stage and coupled to an output of the low noise amplifier; and

forming an output connector attached to the circuit board coupled to the cavity of the second filter stage.

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~~48-50. (Canceled)~~

51-73. (Canceled)

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